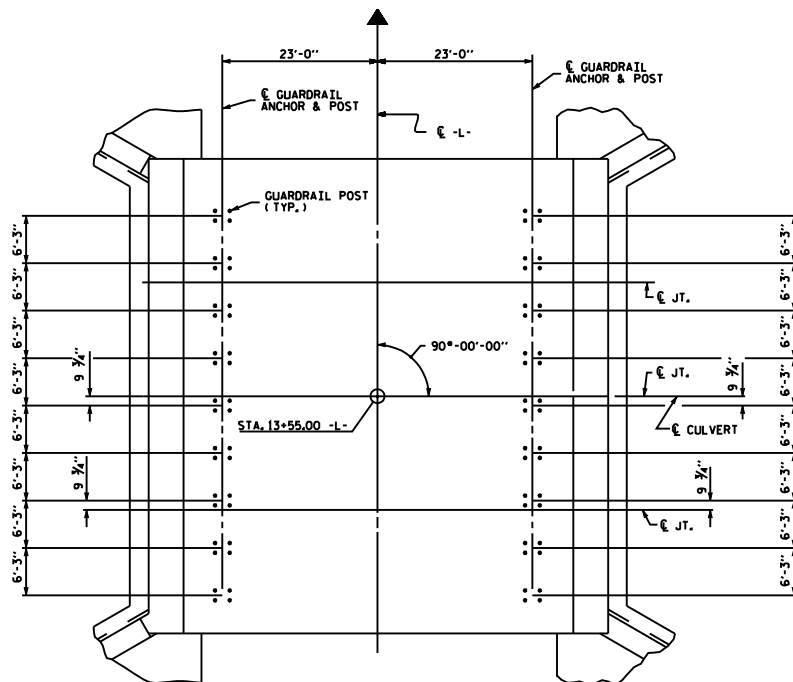


FIGURE 9 - 20



PLAN OF PRECAST CULVERT  
GUARDRAIL POST SPACING

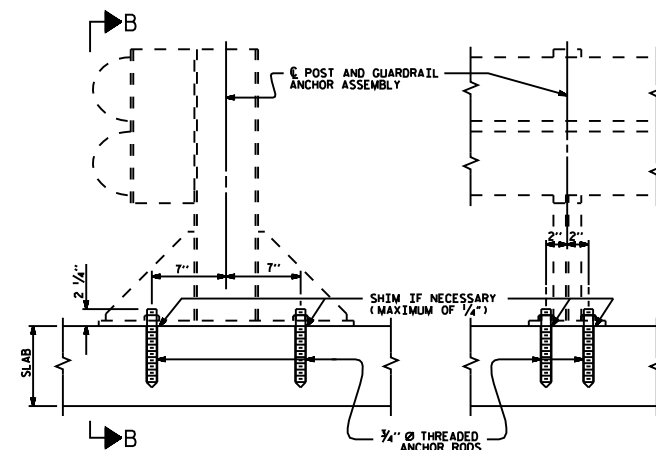
NOTE: GUARDRAIL POSTS PLACEMENT AS SHOWN.  
GUARDRAIL POSTS AND THREADED ANCHOR RODS  
MUST CLEAR ALL JOINTS OF PRECAST CONCRETE  
CULVERT UNITS.

# NOTES

ALL GUARDRAIL ATTACHMENTS SHALL BE MADE USING ADHESIVELY  
ANCHORED ANCHOR BOLTS. LEVEL TWO FIELD TESTING IS REQUIRED,  
AND THE YIELD LOAD OF THE 3/4" Ø BOLT IS 12.8 KIPS. FOR ADHESIVELY  
ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS.

ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE 3/4" Ø AND MEET THE  
REQUIREMENTS OF ASTM A325. BOLTS, NUTS, AND WASHERS SHALL BE  
GALVANIZED.

PAYMENT FOR GUARDRAIL, POST, AND POST BASE PLATES IS INCLUDED  
IN ROADWAY PAY ITEMS.



SECTION A-A

SECTION B-B

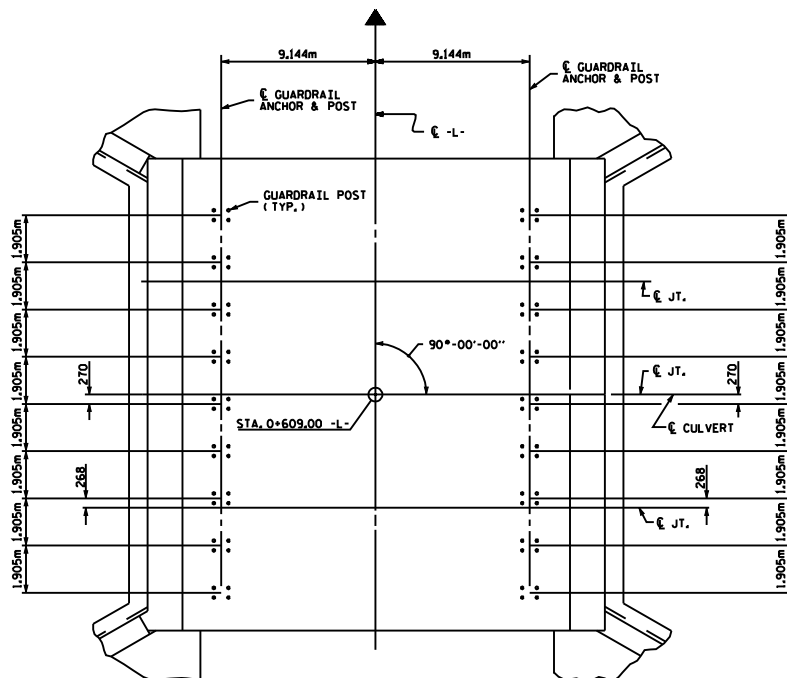
PROJECT NO. EXAMPLE  
COUNTY                       
STATION:                     

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
HALEIGH  
ANCHORAGE DETAILS FOR  
GUARDRAIL ATTACHMENTS  
FOR CULVERTS

DRAWN BY :                      DATE :                       
CHECKED BY :                      DATE :                     

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS
2			4			

FIGURE 9 - 20 M



PLAN OF PRECAST CULVERT  
GUARDRAIL POST SPACING

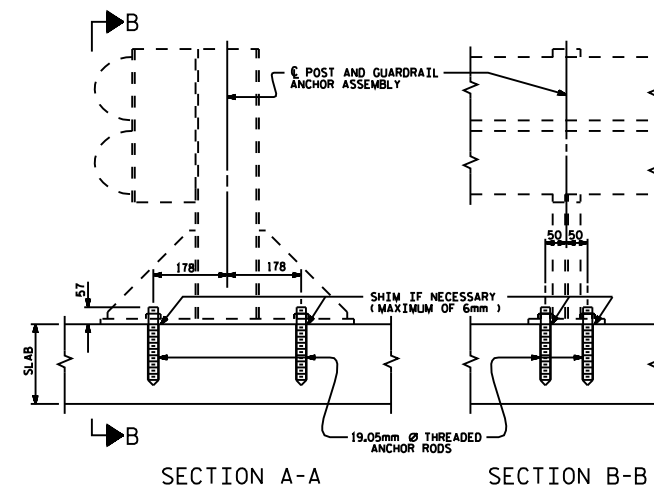
NOTE: GUARDRAIL POSTS PLACEMENT AS SHOWN.  
GUARDRAIL POSTS AND THREADED ANCHOR RODS  
MUST CLEAR ALL JOINTS OF PRECAST CONCRETE  
CULVERT UNITS.

# NOTES

ALL GUARDRAIL ATTACHMENTS SHALL BE MADE USING ADHESIVELY ANCHORED ANCHOR BOLTS. LEVEL TWO FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE 19.05mm Ø BOLT IS 56.7kN. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS.

ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE 19.05mm Ø AND MEET THE REQUIREMENTS OF ASTM A325. BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.

PAYMENT FOR GUARDRAIL, POST, AND POST BASE PLATES IS INCLUDED IN ROADWAY PAY ITEMS.



PROJECT NO. EXAMPLE  
COUNTY \_\_\_\_\_  
STATION: \_\_\_\_\_

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
BUREAU  
ANCHORAGE DETAILS FOR  
GUARDRAIL ANCHOR ASSEMBLY  
FOR PRECAST CULVERTS

DRAWN BY : \_\_\_\_\_ DATE : \_\_\_\_\_  
CHECKED BY : \_\_\_\_\_ DATE : \_\_\_\_\_

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS
2			4			